

ABSTRACT OF THE DISCLOSURE

Metal hydride compounds, which are prepared by mixing together from about 1 to about 10 parts by molecular weight of at least one metal selected from the group consisting of silicon, aluminum, tin, and zinc; from about 1 to about 3 parts by molecular weight of an alkali metal hydroxide; and from about 5 to about 10 parts by molecular weight of water and allowing this mixture to stand for a time sufficient to form a metal hydride, can be used for making fuel additives, treating sour gas, enhancing oil refining, extracting oil from tar sands and shale, increasing production of hydrogen from a hydrogen plant, treating oil and gas wells to enhance production, eliminate PCBs, cleaning soil contaminated by hydrocarbons and./or heavy metals, controlling odors, cleaning polluting stack emissions, extracting edible and essential oils, and eliminating bacteria, fungicides, and parasites from vegetation.